IFW

EST AVAILABLE

EP 1 9 2006

Total Number of Pages in This Submission

PTO/SB/21 (07-06) Approved for use through 09/30/2006. OMB 0651-0031

Approved for use through 09/30/2006. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

5074A-000064

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL FORM Filing Date First Named Inventor Art Unit Strain Strain

Attorney Docket Number

ENCLOSURES (check all that apply) After Allowance Communication to Fee Transmittal Form Drawing(s) Technology Center (TC) Appeal Communication to Board of Fee Attached Licensing-related Papers Appeals and Interferences Petition Appeal Communication to TC Amendment / Reply (Appeal Notice, Brief, Reply Brief) Petition to Convert to a After Final Proprietary Information Provisional Application Power of Attorney, Revocation Affidavits/declaration(s) Status Letter Change of Correspondence Address Terminal Disclaimer Other Enclosure(s) Extension of Time Request (please identify below): Form 1449 citing 138 U.S. Patent Request for Refund Documents, citing and Express Abandonment Request enclosing 39 Foreign Patent CD, Number of CD(s) Documents, and citing and Information Disclosure Statement enclosing 52 Other Documents; and acknowledgment postcard. The Commissioner is hereby authorized to charge any additional Remarks Certified Copy of Priority fees that may be required under 37 CFR 1.16 or 1.17 to Deposit Document(s) Account No. 08-0750. A duplicate copy of this sheet is enclosed. Response to Missing Parts/ Incomplete Application Response to Missing Parts under 37 CFR 1.52 or 1.53 SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT Reg. No. Firm Attorney Name Richard W. Warner 38.043 Harness, Dickey & Pierce, P.L.C. Individual name Signature Date

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.

Typed or printed name	Richard W. Warner	Express Mail Label No.	EV 806662517 US
Signature	pol w. w m	Date	Sept 19, 2006

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.





PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:

10/644,680

Filing Date:

August 20, 2003

Applicant:

Kevin J. Frank et al.

Group Art Unit:

3736

Examiner:

To be determined

Title:

METHOD AND APPARATUS FOR PERFORMING 2D TO 3D

REGISTRATION

Attorney Docket:

5074A-000064

Director of the United States Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Sir:

Pursuant to 37 C.F.R. §§ 1.56, 1.97 and 1.98, Applicant hereby submits an Information Disclosure Statement for consideration by the Examiner.

I. LIST OF PATENTS, PUBLICATIONS, AND OTHER INFORMATION

The patents, publications and other information requested to be considered by the Office (except unpublished U.S. patent applications) are listed on Form 1449 attached hereto.

II. COPIES

A. Submitted herewith is a legible copy of (i) each foreign patent; (ii) each publication or that portion which caused it to be listed, other than U.S. patents and U.S. patent application publications unless required by the Office; (iii) each unpublished U.S. application listed below in Section IV (i.e., including the specification, claims, and any drawing of the application, or that portion of the application which caused it to be listed, including any claims directed to that portion), except for such applications filed on or after June 30, 2003, pursuant to the Waiver of the Copy Requirement in 37 C.F.R. 1.98 (OG Notice dated

III.

Serial No. 10/644,680 Page 2 of 6

Other document entitled "Reinhardt, H.F., et al., Mikrochirugische Entfernung tiefliegender Gefäßmißbildungen mit Hilfe der Sonar-Stereometrie (Microsurgical Removal of Deep-Seated Vascular Malformations Using Sonar Stereometry)" is included with an English abstract.

English abstracts are provided for:

French Patent No. 2 618 211
Japanese Patent No. 3267044
German Patent No. 35 08730
German Patent No. 37 17 871
German Patent No. 38 38011
German Patent No. 42 13 426
German Patent No. 42 25 112
German Patent No. 197 15 202
German Patent No. 197 47 427
German Patent No. 197 51 761
German Patent No. 198 32 296
WIPO Patent No. 95/07055
WIPO Patent No. 97/36192
WIPO Patent No. 99/21498

C. 🔲	The	following	additional	information	is	provided	for	the	Examiner's
consid	deratio	n.							

IV. CROSS REFERENCE TO RELATED APPLICATION(S)

A. The Examiner is advised that the following co-pending application(s) contain(s) subject matter that may be related to the present application. By bringing this(these) application(s) to the Examiner's attention, Applicant(s) does (do) not waive the confidentiality provisions of 35 U.S.C. § 122.

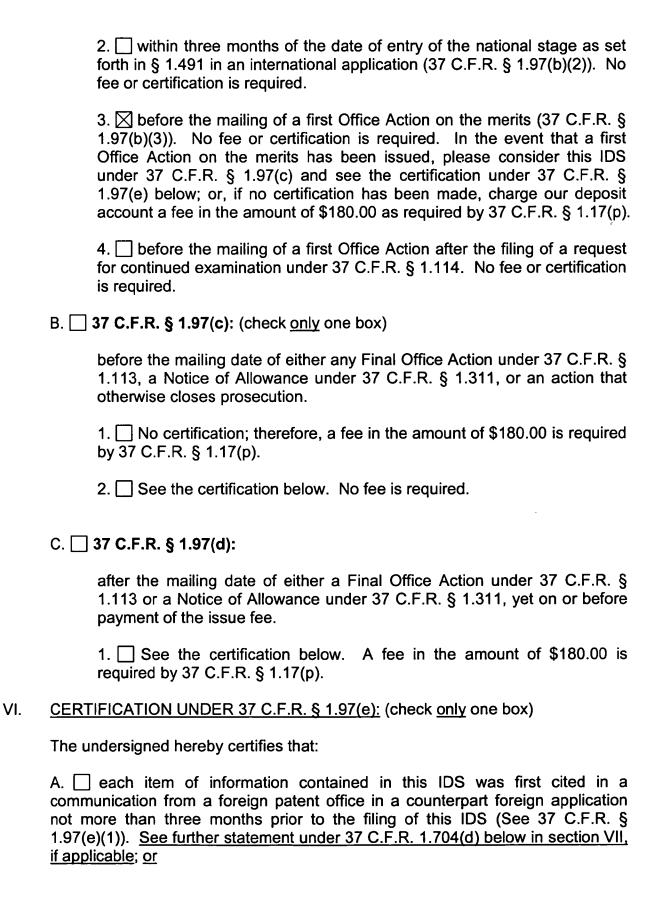
Serial No. <u>Filing Date</u> <u>Inventor(s)</u>

V. THIS IDS IS BEING FILED UNDER

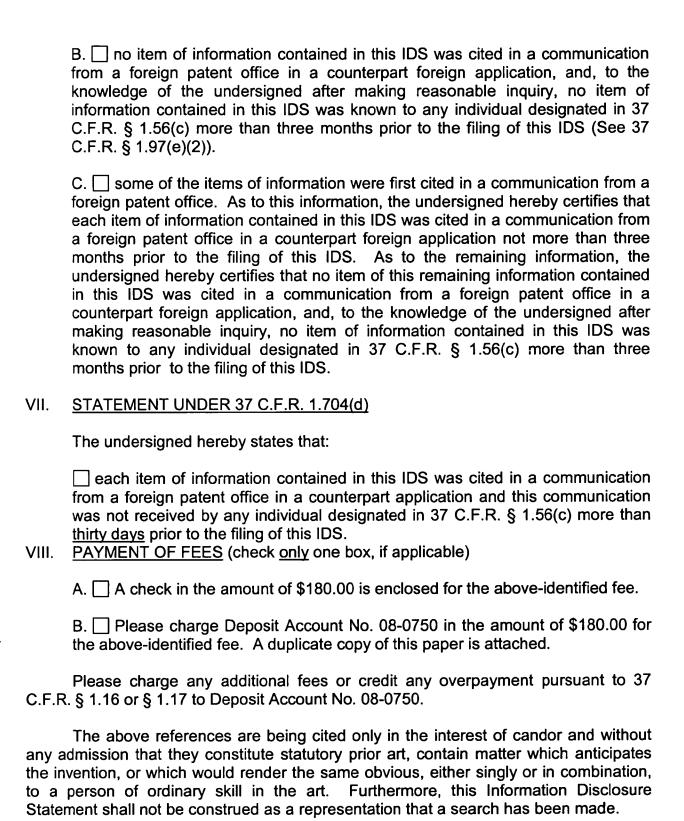
A. **37 C.F.R. § 1.97(b):** (check <u>only</u> one box)

1. within three months of the filing date of a national application other than a continued prosecution application under § 1.53(d) (37 C.F.R. § 1.97(b)(1)). No fee or certification is required.

Serial No. 10/644,680 Page 3 of 6



Serial No. 10/644,680 Page 4 of 6



Serial No. 10/644,680 Page 5 of 6

If it is determined that this IDS has been filed under the wrong rule, the PTO is requested to consider this IDS under the proper rule (with a petition if necessary) and charge the appropriate fee to Deposit Account No. 08-0750.

Respectfully submitted,

Date: Sept. 19,2006

y: _____

Richard W. Warner, Reg. No. 38,043 Michael L. Taylor, Reg. No. 50,521

HARNESS, DICKEY & PIERCE, P.L.C. P.O. Box 828 Bloomfield Hills, Michigan 48303 (248) 641-1600 SEP 1 9 2006

FORM HD 1449 (Based on Form PTO-1449)

PATENT AND TRADEMARK OFFICE
INFORMATION DISCLOSURE CITATION
(Use several sheets if necessary)

Sheet 1 of 11

ATTORNEY DOCKET No.	SERIAL NO.	
5074A-000064	10/644,680	
APPLICANT		
Kevin J. Frank et al.		
FILING DATE	GROUP	
August 20, 2003	3736	

U.S. F	PATENT DO	CUMENTS				
Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date
1.		3,109,588	11/1963	Polhemus et al.		
2.		3,614,950	10/1971	Rabey		
3.		3,644,825	02/1972	Davis, Jr. et al.		
4.		3,821,469	06/1974	Whetstone et al.		
5.		3,983,474	09/1976	Kuipers		
6.		4,017,858	04/1977	Kuipers		
7.		4,182,312	01/1980	Mushabac		
8.		4,228,799	10/1980	Anichkov et al.		
. 9.		4,256,112	03/1981	Kopf et al.		
10.		4,298,874	11/1981	Kuipers		
11.		4,319,136	03/1982	Jinkins		
12.		4,328,548	05/1982	Crow et al.		
13.		4,341,220	07/1982	Perry		
14.		4,346,384	08/1982	Raab		
15.		4,396,945	08/1983	DiMatteo et al.		
16.		4,419,012	12/1983	Stephenson et al.		
17.		4,506,676	03/1985	Duska		
18.		4,571,834	02/1986	Fraser et al.		
19.		4,583,538	04/1986	Onik et al.		
20.		4,608,977	09/1986	Brown		
21.		4,617,925	10/1986	Laitinen		
22.		4,638,798	01/1987	Shelden et al.		
23.		4,659,971	04/1987	Suzuki et al.		
24.		4,660,970	04/1987	Ferrano		
25.		4,688,037	08/1987	Krieg		
26.		4,701,049	10/1987	Beckmann et al.		

Examiner: /Sean Motsinger/ Date Considered: 03/26/2009
--

PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

Sheet 2 of 11

ATTORNEY DOCKET NO.	SERIAL NO.
5074A-000064	10/644,680
APPLICANT	
Kevin J. Frank et al.	
FILING DATE	GROUP
August 20, 2003	3736

Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date
27.		4,705,395	11/1987	Hageniers		
28.		4,705,401	11/1987	Addleman et al.		
29.		4,709,156	11/1987	Murphy et al.		
30.		4,710,708	12/1987	Rorden et al.		
31.		4,723,544	02/1988	Moore et al.		
32.		4,733,969	03/1988	Case et al.		
33.		Re. 32,619	03/1988	Damadian		
34.		4,737,032	04/1988	Addleman et al.		
35.		4,742,356	05/1988	Kuipers		
36.		4,742,815	05/1988	Ninan et al.		
37.		4,743,770	05/1988	Lee		
38.		4,743,771	05/1988	Sacks et al.		
39.		4,745,290	05/1988	Frankel et al.		
40.		4,753,528	06/1988	Hines et al.		
41.		4,761,072	08/1988	Pryor		
42.		4,764,016	08/1988	Johansson		
43.		4,779,212	10/1988	Levy		
44.		4,782,239	11/1988	Hirose et al.		
45.		4,788,481	11/1988	Niwa		
46.		4,794,262	12/1988	Sato et al.		
47.		4,804,261	02/1989	Kirschen		
48.		4,805,615	02/1989	Carol		
49.		4,809,694	03/1989	Ferrara		
50.		4,821,200	04/1989	Öberg		
51.		4,822,163	04/1989	Schmidt		
52.		4,829,373	05/1989	Leberl et al.		
53.		4,838,265	06/1989	Cosman et al.		

Examiner:		Date Considered:	03/26/2009	
LACITITIE!.	/Sean Motsinger/	Date Considered.	00/20/200	

PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

Sheet 3 of 11

ATTORNEY DOCKET NO.	SERIAL NO.
5074A-000064	10/644,680
APPLICANT	
Kevin J. Frank et al.	
FILING DATE	GROUP
August 20, 2003	3736

Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date
54.		4,841,967	06/1989	Chang et al.		
55.		4,825,091	08/1989	Breyer et al.		
56.		4,860,331	08/1989	Williams et al.		
57.		4,869,247	09/1989	Howard, III et al.		
58.		4,875,165	10/1989	Fencil et al.		
59.		4,875,478	10/1989	Chen		
60.		4,884,566	12/1989	Mountz et al.		
61.		4,896,673	01/1990	Rose et al.		
62.	1	4,955,891	09/1990	Carol		
-63.		4,961,422	10/1990	Marchosky et al.		
64.		5,017,139	05/1991	Mushabac		
65.		5,047,036	09/1991	Koutrouvelis		
66.		5,078,140	01/1992	Kwoh		
67.		5,098,426	03/1992	Sklar et al.		
68.		5,099,846	03/1992	Hardy		
69.		5,143,076	09/1992	Hardy et al.		
70.		5,193,106	03/1993	DeSena		
71.		5,207,688	05/1993	Carol		
72.		5,224,049	06/1993	Mushabac		
73.		5,230,338	07/1993	Allen et al.		
74.		5,230,623	07/1993	Guthrie et al.		
75.		5,257,998	11/1993	Ota et al.		
76.		5,261,404	11/1993	Mick et al.		
77.		5,285,787	02/1994	Machida		
78.		5,291,889	03/1994	Kenet et al.		
79.		5,299,253	03/1994	Wessels		
80.		5,300,080	04/1994	Clayman et al.		

Examiner: 03/26/2009	<u> </u>	·		
(S020 RROUGH)	Examiner:	/Sean Motsinger/	Date Considered	03/26/2009

PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

Sheet 4 of 11

ATTORNEY DOCKET NO.	SERIAL NO.	
5074A-000064	10/644,680	
APPLICANT		
Kevin J. Frank et al.		
FILING DATE	GROUP	
August 20, 2003	3736	

Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date
81.		5,306,271	04/1994	Zinreich et al.		
82.		5,307,072	04/1994	Jones, Jr.		
83.		5,330,485	07/1994	Clayman et al.		
84.		5,359,417	10/1994	Müller et al.		
85.		5,371,778	12/1994	Yanof et al.		
86.		5,394,875	03/1995	Lewis et al.		
87.		5,398,684	03/1995	Hardy		
88.		5,413,573	05/1995	Koivukangas		
89.		5,457,641	10/1995	Zimmer et al.		
.90.		5,469,847	11/1995	Zinreich et al.		
91.		5,480,439	01/1996	Bisek et al.		
92.		5,514,146	05/1996	Lam et al.		
93.		5,566,681	10/1996	Manwaring et al.		
94.		5,568,384	10/1996	Robb et al.		
95.		5,575,798	11/1996	Koutrouvelis		
96.		5,590,215	12/1996	Allen		
97.		5,611,025	03/1997	Lorensen et al.		
98.		5,646,524	07/1997	Gilboa		
99.		5,682,890	11/1997	Kormos et al.		
100.		5,696,500	12/1997	Taylor et al.		
101.		5,740,802	04/1998	Nafis et al.		
102.		5,767,669	06/1998	Hansen et al.		
103.		5,767,960	06/1998	Orman		
104.		5,769,843	06/1998	Abela et al.		
105.		5,810,008	09/1998	Dekel et al.		
106.		5,820,553	10/1998	Hughes		
107.		5,828,770	10/1998	Leis et al.		

Examiner:	/Sean Motsinger/	Date Considered:	03/26/2009
-----------	------------------	------------------	------------

PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

Sheet 5 of 11

ATTORNEY DOCKET NO.	SERIAL NO.	
5074A-000064	10/644,680	
APPLICANT		
Kevin J. Frank et al.		
FILING DATE	GROUP	
August 20, 2003	3736	

Ref.	Examiner's	Document	Date	Name	Class/	(If appropriate)
Desig.	Initials	Number			Subclass	Filing Date
108.		5,882,304	03/1999	Ehnholm et al.		
109.		5,889,834	03/1999	Vilsmeier et al.		
110.		5,947,980	09/1999	Jensen et al.		
111.		5,951,571	09/1999	Audette		
112.		5,957,844	09/1999	Dekel et al.		
113.		5,967,982	10/1999	Barnett		
114.		6,006,127	12/1999	Van Der Brug et al.		
115.		6,013,087	01/2000	Adams et al.		
116.		6,014,580	01/2000	Blume et al.		
117.		6,071,288	06/2000	Carol et al.		
118.		6,076,008	06/2000	Bucholz		
119.		6,096,050	08/2000	Audette		
120.		6,122,541	09/2000	Cosman et al.		
121.		6,147,480	11/2000	Osadchy et al.		
122.		6,165,181	12/2000	Heilbrun et al.		
123.		6,178,345	01/2001	Vilsmeier et al.		
124.		6,194,639	02/2001	Botella et al.		
125.		6,201,387	03/2001	Govari		
126.		6,203,497	03/2001	Dekel et al.		
127.		6,211,666	04/2001	Acker		
128.		2001/0007918	07/2001	Vilsmeier et al.		
129.		6,259,942	07/2001	Westermann et al.		
130.		6,285,902	09/2001	Kienzle, III et al.		
131.		2002/0095081	07/2002	Vilsmeier		
132.		2004/0024309	02/2004	Ferre et al.		
133.		6,314,310	11/2001	Ben-Haim et al.		
134.		6,427,314	08/2002	Acker		

Examiner:	/Sean Motsinger/	Date Considered:	03/26/2009	
	/Sean worsinger/			

PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

Sheet 6 of 11

ATTORNEY DOCKET No.	SERIAL NO.	
5074A-000064	10/644,680	
APPLICANT		
Kevin J. Frank et al.		_
FILING DATE	GROUP	
August 20, 2003	3736	

U.S. F	PATENT DO	CUMENTS	g v Santaj vaj di di Na di di Santaj			
Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date
135.		6,478,802	11/2002	Kienzle, III et al.		
136.		6,484,049	11/2002	Seeley et al.		
137.		6,490,475	12/2002	Seeley et al.		
138.		6,516,046	02/2003	Fröhlich et al.		

FORE	IGN PATE	NT DOCUMENTS			* * * * * * * * * *		
Ref. Desig.	Examiner's Initials	Document Number	Date	Country	Class/ Subclass	Translati Yes	on No
1.		EP 0 062 941	03/1982	Europe			
2.		EP 0 119 660	09/1984	Europe			
3.		EP 0 155 857	01/1985	Europe			
4.		EP 0 326 768	12/1988	Europe			
5.		EP 0 427 358	10/1990	Europe			
6.		EP 0 456 103	05/1991	Europe			
7.		EP 0 908 146	10/1998	Europe			
8.		EP 0 930 046	10/1998	Europe			
9.		DE 35 08730	03/1985	Germany		Abstract	
10.		DE 37 17 871	05/1987	Germany		Abstract	
11.		DE 38 38011	11/1988	Germany		Abstract	
12.		DE 42 13 426	04/1992	Germany		Abstract	
13.		DE 42 25 112	07/1992	Germany		Abstract	
14.		DE 197 15 202	04/1997	Germany		Abstract	
15.		DE 197 47 427	10/1997	Germany		Abstract	
16.		DE 197 51 761	11/1997	Germany		Abstract	
17.		DE 198 32 296	07/1998	Germany		Abstract	
18.		GB 2 094 590	02/1982	Great Britain			
19.		GB 2 164 856	10/1984	Great Britain			
20.		JP 61-94639	10/1984	Japan			No

PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

Sheet 7 of 11

ATTORNEY DOCKET No.	SERIAL NO.
5074A-000064	10/644,680
APPLICANT	
Kevin J. Frank et al.	
FILING DATE	GROUP
August 20, 2003	3736

FORE	IGN PATE	NT DOCUMENTS				A L & Mark 4	eligia Car
Ref. Desig.	Examiner's Initials	Document Number	Date	Country	Class/ Subclass	Translati Yes	on No
21.		JP 62-327	06/1985	Japan			Х
22.		JP 63-240851	03/1987	Japan			Х
23.		JP 3-267054	03/1990	Japan		Abstract	
24.		FR 2 618 211	07/1987	France		Abstract	
25.		WO 90/05494	11/1989	WIPO			
26.		WO 95/07055	09/1994	WIPO		Abstract	
27.		WO 96/32059	11/1995	WIPO			
28.		WO 97/49453	06/1997	WIPO			
29.		WO 97/36192	10/1997	WIPO		Abstract	
3 0.		WO 99/23956	11/1997	WIPO			
31.		WO 99/15097	09/1998	WIPO			
32.		WO 99/21498	10/1998	WIPO		Abstract	
33.		WO 99/27839	12/1998	WIPO			
34.		WO 99/33406	12/1998	WIPO			
35.		WO 99/37208	07/1999	WIPO			
36.		WO 99/38449	01/1999	WIPO			
37.		WO 99/52094	04/1999	WIPO			
38.		WO 99/26549	06/1999	WIPO			
39.		WO 99/29253	06/1999	WIPO			

OTHE	OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)		
Ref. Desig.	Examiner's Initials		
1.		Adams et al., Computer-Assisted Surgery, IEEE Computer Graphics & Applications, pp. 43-51, (May 1990)	
2.		Bergstrom et al. Stereotaxic Computed Tomography, Am. J. Roentgenol, vol. 127 pp. 167-170 (1976)	
3.		Brown, R., M.D., A Stereotactic Head Frame for Use with CT Body Scanners, Investigative Radiology © J.B. Lippincott Company, pp. 300-304 (July-August 1979)	

Examiner:	/O a a a 8 da ta ha a a d	Date Considered:	03/26/2009	
Examiner.	/Sean Motsinger/	Date Considered.	03/26/2009	

FORM HDP-1449 (Based on Form PTO-1449)	ATTORNEY DOCKET No.	SERIAL NO.
PATENT AND TRADEMARK OFFICE	5074A-000064	10/644,680
INFORMATION DISCLOSURE CITATION	APPLICANT	
(Use several sheets if necessary) Sheet 8 of 11	Kevin J. Frank et al.	
	FILING DATE	GROUP
	August 20, 2003	3736

OTHE	OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)				
Ref. Desig.	Examiner's Initials				
4.		Bucholz, R.D., et al. Image-guided surgical techniques for infections and trauma of the central nervous system, Neurosurg. Clinics of N.A., vol. 7, No. 2, pp. 187-200 (1996)			
5.		Bucholz, R.D., et al., A Comparison of Sonic Digitizers Versus Light Emitting Diode-Based Localization, Interactive Image-Guided Neurosurgery, Chapter 16, pp. 179-200 (1993)			
6.		Bucholz, R.D., et al., Intraoperative localization using a three dimensional optical digitizer, SPIE – The Intl. Soc. for Opt. Eng., vol. 1894, pp. 312-322 (Jan. 17-19, 1993)			
7.		Bucholz, R.D., et al., Intraoperative Ultrasonic Brain Shift Monitor and Analysis, Stealth Station Marketing Brochure (2 pages) (undated) No date available			
8.		Bucholz, R.D., et al., The Correction of Stereotactic Inaccuracy Caused by Brain Shift Using an Intraoperative Ultrasound Device, First Joint Conference, Computer Vision, Virtual Reality and Robotics in Medicine and Medical Robotics and Computer-Assisted Surgery, Grenoble, France, pp. 459-466 (Mar. 19-22, 1997)			
9.		Cutting M.D. et al., Optical Tracking of Bone Fragments During Craniofacial Surgery, Second Annual International Symposium on Medical Robotics and Computer Assisted Surgery, pp. 221-225, (November 1995)			
10.		Friets, E.M., et al. A Frameless Stereotaxic Operating Microscope for Neurosurgery, IEEE Trans. on Biomed. Eng., vol. 36, No. 6, pp. 608-617 (July 1989)			
11.		Gallen, C.C., et al., Intracranial Neurosurgery Guided by Functional Imaging, Surg. Neurol., vol. 42, pp. 523-530 (1994)			
12.		Galloway, R.L., Jr. et al, Optical localization for interactive, image-guided neurosurgery, SPIE, Vol. 2164, pp. 137-145 (undated 1994			
13.		Galloway, R.L., et al., Interactive Image-Guided Neurosurgery, IEEE Trans. on Biomed. Eng., vol. 89, No. 12, pp. 1226-1231 (1992)			
14.		Gomez, C.R., et al., Transcranial Doppler Ultrasound Following Closed Head Injury: Vasospasm or Vasoparalysis?, Surg. Neurol., vol. 35, pp. 30-35 (1991)			
15.		Grimson, W.E.L., An Automatic Registration Method for Frameless Stereotaxy, Image Guided Surgery, and enhanced Reality Visualization, IEEE, pp. 430-436 (1994)			
16.		Grimson, W.E.L., et al., Virtual-reality technology is giving surgeons the equivalent of x-ray vision helping them to remove tumors more effectively, to minimize surgical wounds and to avoid damaging critical tissues, Sci. Amer., vol. 280, No. 6, pp. 62-69 (Jun. 1999)			
17.		Guthrie, B.L., Graphic-Interactive Cranial Surgery: The Operating Arm System, Handbook of Stereotaxy Using the CRW Apparatus, Chapter 13, pp. 193-211 (undated No date available			

Examiner:	/Sean Motsinger/	Date Considered:	03/26/2009

FORM HDP-1449 (Based on Form PTO-1449) ATTORNEY DOCKET NO. SERIAL NO.

PATENT AND TRADEMARK OFFICE	5074A-000064	10/644,680
INFORMATION DISCLOSURE CITATION	APPLICANT	
	Kevin J. Frank et al.	
Sheet 9 of 11	FILING DATE	GROUP
INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)	August 20, 2003	3736

OTHE	OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)				
Ref. Desig.	Examiner's Initials				
18.		Hardy, T., M.D., et al., CASS: A Program for Computer Assisted Stereotaxic Surgery, The Fifth Annual Symposium on Comptuer Applications in Medical Care, Proceedings, November 1-4, 1981, IEEE, pp. 1116-1126, (1981)			
19.		Heilbrun, M.D., Progressive Technology Applications, Neurosurgery for the Third Millenium, Chapter 15, J. Whitaker & Sons, Ltd., Amer. Assoc. of Neurol. Surgeons, pages 191-198 (1992)			
20.		Heilbrun, M.P., Computed Tomography – Guided Stereotactic Systems, Clinical Neurosurgery, Chapter 31, pp. 564-581 (1983)			
21.		Heilbrun, M.P., et al., Stereotactic Localization and Guidance Using a Machine Vision Technique, Sterotact & Funct. Neurosurg., Proceed. of the Mtg. of the Amer. Soc. for Sterot. and Funct. Neurosurg. (Pittsburgh, PA) vol. 58, pp. 94-98 (1992)			
22.		Kall, B., The Impact of Computer and Imgaging Technology on Stereotactic Surgery, Proceedings of the Meeting of the American Society for Stereotactic and Functional Neurosurgery, pp. 10-22 (1987)			
23.		Kato, A., et al., A frameless, armless navigational system for computer-assisted neurosurgery, J. Neurosurg., vol. 74, pp. 845-849 (May 1991)			
24.		Kelly, P.J., Computer Assisted Stereotactic Biopsy and Volumetric Resection of Pediatric Brain Tumors, Brain Tumors in Children, Neurologic Clinics, Vol. 9, No. 2, pp. 317-336 (May 1991)			
25.		Kelly, P.J., et al., Results of Computed Tomography-based Computer-assisted Stereotactic Resection of Metastatic Intracranial Tumors, Neurosurgery, Vol. 22, No. 1, Part 1, 1988, pp. 7-17 (January 1988)			
26.		Kelly, P.J., Computer-Directed Stereotactic Resection of Brain Tumors, Neurologica Operative Atlas, Vol. 1, No. 4, pp. 299-313 (1991)			
27.		Kelly, P.J., Stereotactic Imaging, Surgical Planning and Computer-Assisted Resection of Intracranial Lesions: Methods and Results, Advances and Technical Standards in Neurosurgery, Vol. 17, pp. 78-118, (1990)			
28.		Kim, W.S. et al., A Helmet Mounted Display for Telerobotics, IEEE, pp. 543-547 (1988)			
29.		Klimek, L., et al., Long-Term Experience with Different Types of Localization Systems in Skull-Base Surgery, Ear, Nose & Throat Surgery, Chapter 51, pp. 635-638 (undated)			
30.		Kosugi, Y., et al., An Articulated Neurosurgical Navigation System Using MRI and CT Images, IEEE Trans. on Biomed, Eng. vol. 35, No. 2, pp.147-152 (Feb. 1988)			
31.		Krybus, W., et al., Navigation Support for Surgery by Means of Optical Position Detection, Computer Assisted Radiology Proceed. of the Intl. Symp. CAR '91 Computed Assisted Radiology, pp. 362-366 (Jul. 3-6, 1991)			

Examiner:	/Sean Motsinger/	Date Considered:	03/26/2009

PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

Sheet 10 of 11

ATTORNEY DOCKET NO.	SERIAL NO.
5074A-000064	10/644,680
APPLICANT	
Kevin J. Frank et al.	
FILING DATE	GROUP
August 20, 2003	3736

Ref.	Examiner's Initials	
Desig. 32.	ITIIUais	Kwoh, Y.S., Ph.D., et al., A New Computerized Tomographic-Aided Robotic Stereotaxis System, Robotics Age, Vol.7, No. 6, pp. 17-22 (June 1985)
33.		Lavallee, S., et al., Computer Assisted Knee Anterior Cruciate Ligament Reconstruction First Clinical Tests, Proceedings of the First International Symposium on Medical Robotics and Computer Assisted Surgery, pp. 11-16 (September 1994)
34.		Lavallee, S., et al., Computer Assisted Medical Interventions, NATO ASI Series, vol. F 60, 3d Imaging in Medic., pp. 301-312 (1990)
35.		Leavitt, D.D., et al., Dynamic Field Shaping to Optimize Stereotactic Radiosurgery, I.J. Rad. Onc. Biol. Physc., vol. 21, pp. 1247-1255 (1991)
36.		Maurer, Jr., et al., Registration of Head CT Images to Physical Space Using a Weighted Combination of Points and Surfaces, IEEE Trans. on Med. Imaging, Vol. 17, No. 5, pp. 753-761 (October 1998)
37.		McGirr, S., M.D., et al., Stereotactic Resection of Juvenile Pilocytic Astrocytomas of the Thalamus and Basal Ganglia, Neurosurgery, Vol. 20, No. 3, pp. 447-452, (1987)
38.		Ng, W.S. et al., Robotic Surgery - A First-Hand Experience in Transurethral Resection of the Prostate Surgery, IEEE Eng. in Med. and Biology, pp. 120-125 (March 1993)
39.		Penn, R.D., et al., Stereotactic Surgery with Image Processing of Computerized Tomographic Scans, Neurosurgery, vol. 3, No. 2, pp. 157-163 (SepOct. 1978)
40.		Pixsys, 3-D Digitizing Accessories, by Pixsys (marketing brochure)(undated) (2 pages)
41.		Reinhardt, H., et al., A Computer-Assisted Device for Intraoperative CT-Correlated Localization of Brain Tumors, pp. 51-58 (1988)
42.		Reinhardt, H.F. et al., Sonic Stereometry in Microsurgical Procedures for Deep-Seated Brain Tumors and Vascular Malformations, Neurosurgery, vol. 32, No. 1, pages 51-57 (Jan. 1993)
43.		Reinhardt, H.F., et al., Mikrochirugische Entfernung tiefliegender Gefäβmiβbildungen mit Hilfe der Sonar-Stereometrie (Microsurgical Removal of Deep-Seated Vascular Malformations Using Sonar Stereometry). Ultraschall in Med. 12, pp. 80-83 (1991)
44.		Reinhardt, Hans. F., Neuronavigation: A Ten-Year Review, Neurosurgery, pp.329-3 P(undated) avail
45.		Simon, D.A., Accuracy Validation in Image-Guided Orthopaedic Surgery, Second Annual Intl. Symp. on Med. Rob. an Comp-Assisted surgery, MRCAS '95, pp. 185-192 (undated)
46.		Smith, K.R., et al. Multimodality Image Analysis and Display Methods for Improved Tumor Localization in Stereotactic Neurosurgery, Annul Intl. Conf. of the IEEE Eng. in Med. and Biol. Soc., vol. 13, No. 1, p. 210 (1991)

	-			
Examiner:	/Sean Motsinger/	Date Considered:	03/26/2009	

PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)

Sheet 11 of 11

ATTORNEY DOCKET NO.	SERIAL NO.	
5074A-000064	10/644,680	
APPLICANT		
Kevin J. Frank et al.		
FILING DATE	GROUP	
August 20, 2003	3736	

OTHE	R DOCUM	ENTS (including Author, Title, Date, Pertinent Pages, etc.)	
Ref. Desig.	Examiner's Initials	·	
47.		Tan, K., Ph.D., et al., A frameless stereotactic approach to neurosurgical planning based on retrospective patient-image registration, J Neurosurgy, Vol. 79, pp. 296-303 (August 1993)	
48.		Thompson, et al., A System for Anatomical and Functional Mapping of the Human Thalamus, Computers and Biomedical Research, Vol. 10, pp. 9-24 (1977)	
49.		Trobraugh, J.W., et al., Frameless Stereotactic Ultrasonography: Method and Applications, Computerized Medical Imaging and Graphics, Vol. 18, No. 4, pp. 235-246 (1994)	
50.		Von Hanwhr et al., Foreword, Computerized Medical Imaging and Graphics, Vol. 18, No. 4, pp. 225 228, (July-August 1994)	
51.		Wang, M.Y., et al., An Automatic Technique for Finding and Localizing Externally Attached Markers in CT and MR Volume Images of the Head, IEEE Trans. on Biomed. Eng., Vol. 43, No. 6, pp. 627-637 (June 1996)	
52.		Watanabe, E., M.D., et al., Open Surgery Assisted by the Neuronavigator, a Stereotactic, Articulated, Sensitive Arm, Neurosurgery, Vol. 28, No. 6, pp. 792-800 (1991)	

Examiner:	/Sean Motsinger/	Date Considered:	03/26/2009	